
Water Supply and Distribution

Program Results Audit FY 2003/2004

December 2005

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Introduction

This audit is intended to evaluate the effectiveness and accuracy of the performance reporting system in the Water Supply and Distribution Program for FY 2003/2004. It is part of the City of Sunnyvale's program to audit all City programs over an eight year period.

Outcome Measurement in Sunnyvale

Measuring program performance and program outcomes has been a key feature of Sunnyvale's management system for more than two decades. Funding for City programs is not budgeted by line item, such as "salaries," but rather by the efforts or tasks undertaken by staff. These tasks are called "activities." Each activity has a budgeted number of dollars intended to cover the cost of carrying out the task. Each also has a budgeted number of "products" that management is expected to produce with those dollars.

Related activities are grouped together. The groupings are called Service Delivery Plans. Taken together, these activities are expected to yield more than just the sum of the "products" of each activity. Collectively, they are expected to produce broad end results, or "outcomes," that can be measured. For instance, an activity that pays for workers to clean parks will yield a certain number of parks cleaned (the "products"), but also – in conjunction with other activities – will produce a measurable level of "public satisfaction" with parks (the "outcome").

Service Delivery Plans (SDPs) with similar purpose are grouped together to form programs. The Water Supply and Distribution Program (312) contains three SDPs:

1. Managing Water Resources
2. Managing Water Distribution and Quality
3. Managing Administration and Support Services

Measures and activities are not static and continue to evolve as the City and its departments and programs refine the performance measurement system. Programs are regularly reviewed and when necessary restructured to realign measures and activities with program goals. The City began the outcome management system in FY 1995/1996 as part of a continuing effort to improve the City's Planning and Management System (PAMS). The Water Supply and Distribution Program was restructured into the new outcome management system in FY 1998/1999. The Program is part of a City-wide initiative to restructure and realign measures for the next operating budget cycle.

Audit Scope and Methodology

The primary purpose of performance audits is to review the accuracy of reported results for Program measures, Service Delivery Plan measures, and activities. To accomplish this goal, auditors interview program staff and review the organizational systems that generate support documents, calculate reported results, and archive support documents

for future reference. A secondary purpose of this audit process is to review the appropriateness of the measures to the mission and goals of the program. Are the measures capturing the correct data and providing complete and valuable organizational performance information to program management and City policy makers? If the measures are not supplying complete and valuable performance information, auditors may suggest changes to the actual measures themselves.

Although performance result audits are not intended to be operational audits, auditors review program elements that are closely linked to operations. Any operational findings outside the scope of this audit are noted in the *Summary of Findings* section.

Background

The mission of the Water Supply and Distribution Program outlined in the FY 2003/2004 budget is to: "Supply the community with safe and reliable sources of water at competitive prices funded through user fees by:

- Managing water resources in a cost effective manner through utilization of conservation programs, reclaimed water, City owned wells and the purchase of potable water;
- Managing the construction, operation and maintenance of the distribution system to ensure reliable delivery of water that meets all quality and health standards; and
- Providing administrative and support services to promote customer satisfaction and confidence."

Water Supply and Distribution's budget is accounted for in an enterprise fund. The purchase of water for resale constitutes 69.5% of the Program's total FY2003/2004 budget. The cost of purchased water is dictated by contracts with water supply sources and is somewhat outside the Program's control. The amount of water purchased and resulting expenditures by the City vary according to water usage. Exhibit 1 is a budget comparison for FY2002/2003 and FY2003/2004 which isolates purchased water costs from overall budget and actual expenditures for these two years.

Exhibit 1 shows the overall expenditures for the Program were \$671,352 lower than the budgeted amount in FY2002/2003 but \$409,083 higher than the budgeted amount in FY2003/2004 due to the fluctuation in water costs. However, when the cost of purchased water is isolated from the expenditures the actual operating costs were only \$869 more in FY 2003/2004.

Exhibit 2 below shows staffing costs were budgeted to decrease in FY 2003/2004 by \$58,282. In reality, staffing costs increased by \$107, 561. The increase in staffing costs in FY2003/2004 is probably due to an increase in the use of contract personnel

since overtime and compensatory time earned decreased by 2,962 hours. Staffing issues will be discussed on page 4.

Exhibit 1 – FY02/03 and FY03/04 Budget and Expenditure Comparison

BUDGETED		DOLLAR AMOUNT		WORK HOURS	
		FY 02/03	FY 03/04	FY 02/03	FY 03/04
<u>Service Delivery Plans</u>					
1. Managing Water Resources		\$ 1,270,386	\$ 1,178,209	5,651	3,794
2. Managing Water Distribution and Quality		2,271,430	2,085,554	29,755	26,780
3. Managing Admin. & Support Services		1,170,600	1,266,757	25,691	25,561
Operating Budget		\$ 4,712,415	\$ 4,530,520	61,097	56,135
Purchased Water		9,927,418	10,328,520		
Total Budget		\$ 14,639,833	\$ 14,859,040		
<u>ACTUAL EXPENDITURES</u>					
		FY 02/03	FY 03/04	FY 02/03	FY 03/04
<u>Service Delivery Plans</u>					
1. Managing Water Resources		\$ 1,530,275	\$ 1,692,031	7,539	7,911
2. Managing Water Distribution and Quality		2,021,544	1,870,784	32,909	29,282
3. Managing Admin. & Support Services		1,087,558	1,077,431	19,512	19,884
Operating Expenditures		\$ 4,639,377	\$ 4,640,246	59,960	57,077
Purchased Water		9,329,105	10,627,877		
Total Expenditures		\$ 13,968,482	\$ 15,268,123		

Source: FY2002/2003 and FY2003/2004 Period 14 Management by Objective Reports.

Exhibit 2 – FY02/03 and FY03/04 Staffing Cost Comparison

BUDGETED STAFFING COSTS			DIFFERENCE
	FY 02/03	FY 03/04	
<u>Service Delivery Plans</u>			
1. Managing Water Resources	\$ 281,173	\$ 205,101	
2. Managing Water Distribution and Quality	\$ 1,226,505	\$ 1,144,955	
3. Managing Admin. & Support Services	\$ 1,005,025	\$ 1,104,364	
Total	\$ 2,512,703	\$ 2,454,421	\$ (58,282)
ACTUAL STAFFING EXPENDITURES			DIFFERENCE
	FY 02/03	FY 03/04	
<u>Service Delivery Plans</u>			
1. Managing Water Resources	\$ 348,385	\$ 421,256	
2. Managing Water Distribution and Quality	\$ 1,263,390	\$ 1,238,465	
3. Managing Admin. & Support Services	\$ 818,287	\$ 877,902	
Total	\$ 2,430,063	\$ 2,537,624	\$ 107,561

Source: FY2002/2003 and FY2003/2004 Period 14 Management by Objective Reports.

The Water Supply and Distribution Program had a severe managerial staffing shortage in FY 2003/2004. The Program lost its supervisory staff (1.5 FTE) at the end of 2002, and the Superintendent of Field Services covered all supervisor duties for eight months in addition to his other duties. In FY 2003/2004, an SEA employee worked out-of-class with the help of a part-time consultant (one of the supervisors who left the Program in 2002 to retire) to cover supervisor responsibilities. The current supervisor, Val Conzet, was hired in January 2005.

Exhibit 3 below is an organizational chart for the Program in FY 2003/2004. During this fiscal year, the Program had an SEA employee covering supervisor duties, a part-time consulting assistance of a retired Program supervisor, twenty regular staff, one casual clerical, and two seasonal temporary employees.

Exhibit 3 – FY 2003/2004 Organizational Chart for Water Supply and Distribution

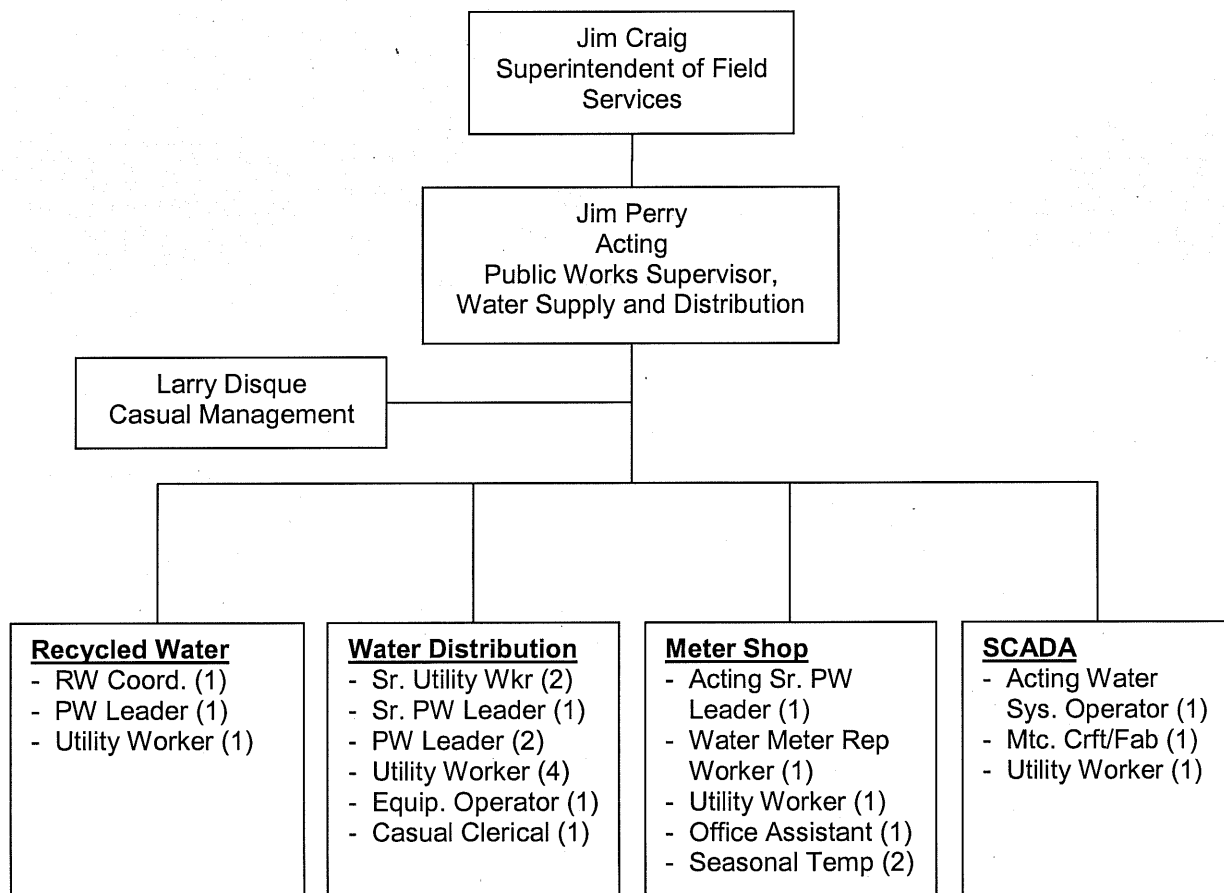
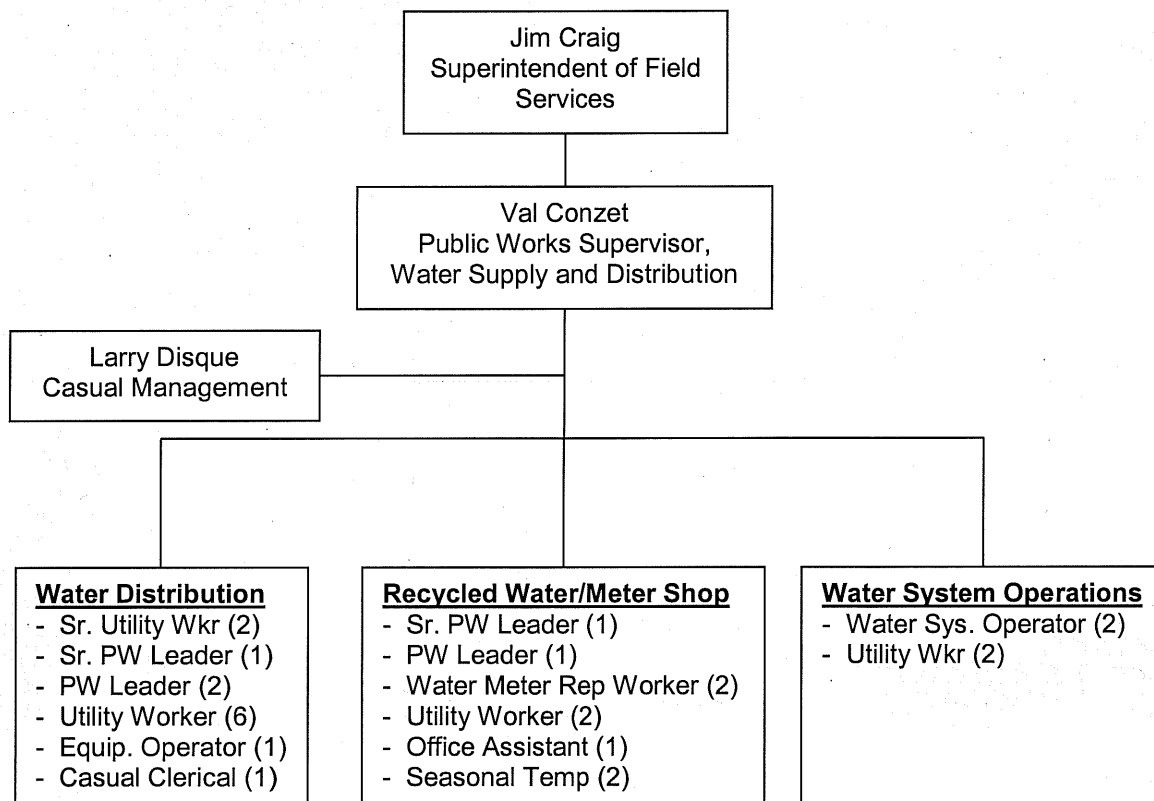


Exhibit 4 below is a current organizational chart for the FY 2004/2005. The Program now has a full-time Public Works Supervisor, part-time consulting assistance from a retired Program supervisor, twenty-three regular staff, one casual clerical, and two seasonal temporary employees.

Exhibit 4 – FY 2004/2005 Organizational Chart for Water Supply and Distribution

During the course of the audit, the City of Sunnyvale started the process of restructuring all programs to the newly revised performance based budgeting system. In addition to restructuring efforts, the City of Sunnyvale is also undergoing a multi-year Optimal Staffing analysis of all major City departments. The entire Department of Public Works, including the Water Supply and Distribution Program, is scheduled for review in FY2005/2006 as part of this on-going process.

It is expected that the Restructure and Optimal Staffing Study will address some of the issues raised in this report. The degree to which these two projects address the findings of this audit will be covered in a subsequent follow-up audit of this Program.

Acknowledgments

Gathering and compiling data can be a very time consuming process. The Auditor would like to thank Val Conzet and Valeria Rose and the staff of the Water Supply and Distribution, and Utility Billing Collection and Revenue Management Programs for undertaking the task of compiling data for the audit while juggling everyday operational commitments.

Kate Murdock was the primary auditor for this audit and report. The Auditor would like to acknowledge the efforts of the following people who also contributed time to the completion of this report: Val Conzet, Valeria Rose, Jim Craig, Mike Chan, Tim Kirby, Nick Kurns, Tim Kashitani, and Sue English.

Summary of Main Findings

Citywide Issues

The Water Supply and Distribution Program audit is based on measures from the City of Sunnyvale's Performance Outcome Budget in FY 2003/2004. The development of the Performance Outcome Budget was a multi-year project that introduced new approaches to measurement which were more complex than previous City budget systems. Some of the measures were standardized throughout the whole system. When the Performance Outcome Budget was implemented at the program level, there was often not adequate time to provide managers with all of the technical support and financial resources needed to implement the complex reporting systems.

While the City is now moving to a new and enhanced Performance Based Budget System for FY 2006/2007, current performance audits evaluate data reported through the old Performance Outcome Budgeting system. There have been several recurrent data tracking and reporting issues that have surfaced in recent performance audits that the City may want to address with the new system:

1. Some programs are recording and calculating reported results through the manual transmission of data from paper source documents into Excel spreadsheets. Some programs are still tracking information manually with paper documents only. Although these manual systems are very time consuming to manage, and inherent with human error, their development was necessary to provide some information to City Management until new systems could be developed. Automation would increase the integrity and accuracy of reported results while decreasing the need to take staffing resources away from organizational objectives.
2. Measures tend to be transient. Some measures use a 3-year average as a target but recent audits have shown that many of these measures change or are deleted before a 3-year average has been established. The transience of measures could be an indication of development or implementation flaws with the old system. On average, it takes a year working closely with management analysts to develop strategic performance measures that are linked to core business processes and to develop the supporting reporting systems. It then takes another year to refine and adjust the system. After this point, measures

should be relatively stable because they are linked to the workflow of core business processes which usually do not change dramatically over time.

3. Calculation and filing systems in many cases do not allow the auditor to reproduce results. In many Programs, original source documents were tallied onto spreadsheets and then dispersed and filed by individual vendors or grouped by location. This process made reproducing and/or verifying reported results problematic. Documents need to be cross-referenced to allow the individual items/products constituting a result number to be accounted for.
4. Measures that rely on data from evaluation and scoring systems are difficult for managers to implement without expertise in this area. Considering the resources necessary to design and implement an evaluation and reporting system, it is more cost effective to provide the expertise initially than trying to correct non-functioning systems.

The first three of these four issues mentioned above have influenced the findings of this audit. Data transmission and automation is a particularly important issue for the Water Supply and Distribution Program.

Program Issues

Auditors noted a disconnect between Program performance targets and resource allocation in planning for critical tasks such as maintenance and repairs. For example, staff acknowledged preventative maintenance activities should be performed in accordance with American Water Works Association (AWWA) standards and measured their performance against these standards, but they did not budget and plan for achieving these standards. Staff cited a lack of resources as the reason for not performing in accordance with AWWA standards.

Performance Outcome Measure #1 sets a target for the Program to set water rates at 5% less than the Bay Area average. The Program reported that Sunnyvale's rates were 32.4% less than the Bay Area average in FY 2003/2004. It is possible that the Program's success in keeping water rates significantly lower than the local average has adversely impacted the available resources to perform the required maintenance to meet AWWA standards. With a water infrastructure worth roughly \$800 million, the balance between providing low rates to customers and City asset protection should be reviewed by Program Management and Sunnyvale leadership.

The Program lacks an automated work order system capable of generating reports and tracking Program activities. As a result, staff spends excessive amounts of time manually logging, tracking, and calculating results for many of the Program's measures and activities. This is an inefficient and uneconomical use of staff time and City resources. In 2002, Program management researched two automation alternatives: 1) MAXIMO, a work-order and asset management system; and 2) GPS data collection

hardware that would automate the updating of Sunnyvale's existing GIS system with utility infrastructure. All progress towards automation stopped at the end of 2002 when the City faced a budget deficit in 2003.

The lack of adequate work-order systems is also related to poor documentation of several activities. Auditors found many logs were not properly maintained and did not reconcile with reported results. For some activities, there are no logs and timecards are the only source of documentation. Timecards can be used to track hours and products, but are not adequate for documenting activities. The Program needs to maintain complete logs for all activities and use these logs to report results.

Until automation efforts can be resumed, the Program needs to develop documentation systems that track services provided and products generated. Auditors are available to assist in developing these systems in the implementation stage of this audit. In addition, the upcoming Optimal Staffing Study provides a great opportunity for the Program to link new electronic tracking system(s) to work processes.

As mentioned in the Background section of this report, the Water Supply and Distribution Program functioned from the end of 2002 to January 2005 essentially without a supervisor. This, in addition to automation issues, has significantly impacted the specific findings of this audit outlined below.

Specific Findings

To verify the accuracy or inaccuracy of reported results, auditors need to see the source documentation that is used to build the product numbers. The audit examined 27 unique, active measures and activities. Six activities were not audited because they were comprised of work hours, which do not require/generate source documentation other than timecards. Due to the data management issues mentioned in the Program Issues section above, this audit was unable to verify (as accurate or inaccurate) the reported results for eleven measures (41% of the 27 measures). Ten measures could not be verified as accurate or inaccurate because data was not systematically collected, maintained, or could not be cross-referenced to calculation sheets and/or reported results. One measure could not be verified because the SOP did not provide adequate instruction on how to calculate the result.

Sufficient data was available to determine accuracy for sixteen (59%) of the 27 measures. Of these measures, auditors found nine (33%) were accurate and seven (26%) were not. Out of the seven measures that were not accurate, five had reporting discrepancies where the result provided by staff on summary calculation sheets did not reconcile with reported results. Four had data integrity issues including insufficient data to support reported results and inadequate data collection procedures. Five of the inaccurate measures had measure text that was inconsistent with the results reported or the measure text did not provide adequate context for the results to be understood by its audience. Three of the inaccurate measures were not calculated correctly.

While all of the 27 measures had SOPs, 9 (33%) had SOPs requiring minor to major revisions. For example, 4 SOPs did not reflect the actual collection and calculation procedures being followed. Four measures had SOPs that did not adequately instruct staff how to record, track and/or calculate reported results; and finally, 3 measures had SOPs with inadequate or incorrect calculation methodologies.

Attachment 1 to this report is a calculation table for the above statistics.

Section 1: Program Outcome Measure Details

Program Outcome Measure 1:

City water rates, weighted by user category, are five percent less than the Bay Area average as determined by Bay Area Water Users Association surveys. Reported Result: 32.4%

SDP Measure 31203.3 is a duplicate of this Program Measure.

The intent of this measure is to insure City water rates remain competitive and below the rates of other Bay Area jurisdictions. The Program uses water bills as a proxy for water rates to calculate this measure. Auditors determined this was an acceptable practice. The result for this measure comes from a report produced by the Bay Area Water Supply and Conservation Agency (BAWSCA), "Current Residential Water Bills Based on BAWSCA-Wide Monthly Average Use of 14 Units." The source for the report is the BAWSCA FY 2003-2004 Annual Survey. Based on the BAWSCA report, Sunnyvale's average residential monthly bills are 32.3% less than the average reported among other Bay Area jurisdictions.

Finding #1: The measure wording is misleading. This measure only looks at residential water rates. Program staff indicated this measure reports only on residential rates because BAWSCA does not provide comparative information on other user categories such as industrial and commercial. While the City would like to be able to compare these other user categories with surrounding jurisdictions, the cost and time involved in the Program producing its own study are prohibitive.

Recommendation #1: Staff should revise the measure wording to reflect only residential water rates are being reported.

Finding #2: The measure and its reported result do not provide an adequate context for the reader to assess Sunnyvale's performance. The measure should include the actual Bay Area average in order for the reader to interpret the percentage result. However, staff stated the budget structure in place in FY 2003/2004 did not allow them to report both numbers.

Finding #1: Staff did not record actual times when water was turned off and on for service. Staff calculated this measure by multiplying the number of water main breaks by 30 minutes. The 30 minutes is an approximation of how long the water is turned off during a repair, not an actual calculated average.

Recommendation #1: None. The Program is now logging the actual time water is turned off. Auditors verified the new log being used is adequate to track and report results for this measure.

Finding #2: This measure does not provide a stable service level goal. It measures success by previous years' results, which assumes the previous years' results were at an acceptable level. A three-year average only provides an idea of what the current service level is and not where it should be according to policy and/or industry standards.

Recommendation #2: The Program should assess what an appropriate service goal is in relation to its policies and/or industry standard service levels and change the measure accordingly.

Finding #3: The current SOP methodology does not reflect actual practice. The Department reports the three year average for the total number of hours water is turned off and the total number of hours customers are without water for the current year. However, the SOP specifies the reported result should be a ratio similar to that used for the Budget/Cost ratio.

Recommendation #3: The SOP should be updated to reflect current practice.

Program Outcome Measure 3:

The Water Program is in compliance with all health and water quality regulatory agencies 100% of the time. Reported Result: 100%

SDP Measure 31202.05 is a duplicate of this Program Measure.

This measure is meant to ensure the program's facilities and systems meet the standards of various regulatory agencies. Program staff based the results for this measure on the "Annual Compliance for Public Water Systems, Calendar Year 2002," a report issued by the Department of Health Services (DHS) Drinking Water Program. Based on this report, Sunnyvale did not communicate any violations. The Program reported 100% compliance.

Finding #1: The measure wording can be misleading. Stating the Water Program is in compliance with health and water quality regulatory agencies 100% of the time, implies the Water Program is being monitored 100% of the time. In reality, the Program takes water samples and self-reports any problems to DHS which compiles an annual report that is sent to the Environmental Protection Agency.

Recommendation #1: None. The Program solved this problem by proposing new text for the measure in the FY 2005/2006 budget restructure. The new measure reads, "Water samples are collected and tested in compliance with Health Department regulations with a target of 99.5% of the time over 2200 samples."

Finding #2: The SOP does not instruct staff on how to calculate the reported result. If the City fails to meet any standards established by DHS or other agencies, the City is notified. The SOP states any notice received by the City is an indication the outcome was not met. It is not clear from the SOP how to translate notice(s) received into a percentage of compliance or non-compliance. The SOP does not specify whether the number of notices should be divided by days of the year, number of samples submitted, etc., to derive the percentage result.

Recommendation #2: *Staff should keep this finding in mind when they develop the SOP for the new measure making sure it clearly instructs staff how to track and calculate the measure's result.*

Finding #3: The Program calculates the reported result from the annual DHS report which summarizes the number of notices sent to the City for non-compliance during the year. This report is based on the calendar year, which does not match Sunnyvale's fiscal reporting structure. It is unclear from the SOP how the Program reconciles these two different timelines to determine the reported results.

Recommendation #3: *None. This issue has been addressed by the new measure.*

Program Outcome Measure 4:

Average total potable water usage is 5% below the 1987 baseline during periods of drought and no higher than baseline at all other times.

Reported Result: **Percent below baseline during non-drought – 130.51%**
 Percent below baseline during drought years – 0%

SDP Measure 31201.5 and 31201.6 stem from this Program Measure.

This measure helps the Program manage water resources in times of drought and non-drought. Program staff stated a 1987 baseline is used because it represents the City's highest water usage in recent California history.

Finding #1: The measure wording was inaccurate. The measure does not represent an average, as the measure indicates, but total water usage. However, this measure is being changed in the FY 2005/2006 budget restructure to report per capita water usage.

Recommendation #1: *None. The new FY 2005/2006 measure makes this finding obsolete. The new measure reads "Gross per capita water usage, based upon purchases from Sunnyvale's three potable sources (SFPUC, SCVWD, groundwater) shall not exceed the average of the previous five years, exclusive of drought years."*

Finding #2: The baseline amount was not included in the measure text. Including the baseline is necessary to preserve this number and to provide context for Sunnyvale's

water usage. However, this measure has been changed due to the current restructure and this finding will not apply to the new measure.

Recommendation #2: None. The FY 2005/2006 budget restructure requires target and baseline amounts to be reported to give the new measure context.

Finding #3: By providing percentages for both non-drought and drought years, it appears that both are occurring at the same time. This measure is tracking multiple pieces of data: 1) whether it is a drought or non-drought year and 2) what actual water usage was in comparison to the baseline year. Staff informed auditors that FY 2003/2004 was a non-drought year.

Recommendation #3: None. This measure is being changed in the FY 2005/2006 budget restructure.

Finding #4: The numbers to calculate the result were divided in the wrong direction. Program staff divided the baseline year amount by the current year amount rather than the current year by the baseline year. The Program provided a calculation sheet that shows a result for FY 2003/2004 of 23.4% below the baseline, not 130.51% below the baseline, which was the reported result.

Recommendation #4: Program staff should review calculations prior to submitting year-end results and make sure that they reconcile with recorded numbers.

Finding #5: The result on the calculation sheet provided to auditors was correct, but does not match the reported result in the MBO. Program staff stated there had been turnover in the position responsible for reporting this result.

Recommendation #5: Program staff should create calculation sheets at the time results are reported and archive these sheets with source data.

Finding #6: The stated usage goals may not accurately reflect the Program's intent. This measure originally had a usage goal of 15% below the baseline during periods of drought. Auditors asked staff about the change from 15% to 5% and they indicated that the 5% applies to non-drought years and 15% applies to drought years. However, this is not what the current measure states.

Recommendation #6: None. This measure is being changed in the FY 2005/2006 budget restructure.

Program Outcome Measure 5:

**A customer satisfaction rating of 80% for Water Supply and Distribution is achieved.
Reported Result: 85%**

SDP Measure 31203.1 is a duplicate of this Program Measure.

The result for this measure comes from the City's Resident Survey conducted biannually by the Gelfond Group. Residents were asked, "How would you rate the City of Sunnyvale on the following services: Utilities (water service)." The Program reported the number of favorable responses, which audit staff confirmed as 85%.

Finding #1: The reported result includes "favorable," but not "neutral" responses. While the City does not have a standard with regards to what categories of response should be included in customer satisfaction survey results, audit staff has observed that many programs report the combined number of "favorable" and "neutral" responses when reporting for these types of measures. Since the same citizen comments on all City programs, audit staff recommends that reporting of these results should be standardized across programs. If the Water Program had included neutral responses in their results, as many other programs do, they would have achieved a customer satisfaction rating of 98%.

Recommendation #1: Audit staff recommends that the Water Program consider including "neutral" responses in calculating results for this measure as they are understating their performance when compared to many other City programs.

Program Outcome Measure 7:

The Budget/Cost Ratio (planned cost divided by actual cost) is at 1.0. Reported Result: 0.97

Audit staff verified the reported result of this measure using the Management by Objective Report for the last accounting period (14) of FY 2003/2004 which shows the Program spent slightly over budget by approximately 3%. The budgeted amount for this program was \$14,859,040. The Program spent \$15,268,123. The ratio reported for this measure is correct.

Finding #1: The SOP instructs staff to calculate a percentage, not a ratio. The measure SOP states that the planned budget is divided by the actual budget and multiplied by 100. This would result in a percentage being reported and not a ratio. However, the Program reported the correct result and did not multiply by 100.

Recommendation #1: None. The Budget/Cost ratio measures were eliminated in the FY 2005/2006 budget restructure.

Program Outcome Measure 8:

85% of the annual identified recycled water users are connected to the recycled water system. Reported Result: 104.9%

SDP Measure 31201-4 is a duplicate of this Program Measure.

This measure changed in FY 2003/2004 to the language above. The original intent was to measure the amount of recycled water consumed versus produced. The data and calculations submitted for this measure are for water consumption and production, not connections to the system. In FY 2004/2005, the measure was changed back to reflect the original intent.

Finding #1: The measure wording does not reflect what is actually being measured. The reported result reflects water consumption versus production, not connections to the recycled water system. Program Staff indicated they did not have an approved SOP for the current measure as it appeared in the Budget.

Recommendation #1: None. This measure has been eliminated in the FY 2005/2006 budget restructure. The new measure is "Recycled water customers are re-tested every four years for cross-connection control."

Finding #2: There is a discrepancy between the calculation sheet provided to summarize water consumption and the source documentation. Two numbers are required to calculate the result for this measure: 1) the amount of recycled water produced by the City, and 2) the amount of recycled water consumed. Auditors confirmed 1,815 acre feet of water was produced. However, the source documents for water consumption yielded a total of 1,905.28 acre feet, not the 1,860.69 acre feet used by the Program to calculate the result. This is a percentage difference of 2.4 which is within the range of meter error standards set by AWWA.

Recommendation #2: Staff needs to reconcile source documents with calculation sheets.

Finding #3: There is a discrepancy between the result shown in the calculation sheet and the result reported in the MBO. Staff provided a calculation sheet with a result of 102.5%, not the 104.9% reported.

Recommendation #3: Calculation sheets need to be created at the time results are reported and these sheets should be archived with source documents. Staff needs to reconcile calculations with what is reported in the MBO and correct any misreporting.

Section 2: Service Delivery Measure Details

Service Delivery Measure 31201-1:

During years when non-contract pricing is available, the average acre foot cost of Santa Clara Valley Water District purchased water is at 95% of contract pricing. Reported Result: 99.61%

The intent of this measure is to help the Program manage water resources by ensuring they are always using the least expensive water source available from Santa Clara Valley Water District at any given time. The Program is obligated, under the current contract, to purchase 10,560 acre feet at the contract price of \$460 per acre foot. In FY 2003/2004, the Program purchased 995 Acre Feet at a non-contract price of \$420 per acre foot. Audit staff confirmed the number of acre feet of contract and non-contract water purchased by the Program and expenditures for this water. Auditors notes an error in the calculation methodology resulting in a slight understatement of Program results (see Finding #3), but were still able to confirm the reported result as accurate.

Finding #1: The measure has a structural flaw in that the more water purchased by the Program, the better the reported result. The Program is obligated by contract to buy a certain amount of water at the contract price. Water purchased above and beyond the amounts specified in the contract is purchased at below contract prices. This measure compares the average price per acre foot spent by the Program to the contract price. If the Program's conservation efforts are successful, the City typically does not need to purchase more water than projected in the contract. Program staff stated they have not met this measure in recent years due in part to their conservation efforts, resulting in less non-contract water being purchased.

Recommendation #1: The Program needs to develop a measure that actually gauges their efforts to purchase the cheapest water source available. Staff should consult with auditors in developing a new measure.

Finding #2: The SOP does not accurately reflect the practices of the Program or the measure. The SOP states that the goal of the measure is to ensure that the Program "continually utilize the cheapest source of water, whether it is SCVWD, SFWD, well or recycled water, or even a newly developed source." However, the measure only reflects contract and non-contract water purchased through SCVWD. In addition, this measure is not used to manage SCVWD purchased water in relation to other sources as the SOP states.

Recommendation #2: Revise the SOP to reflect actual practice.

Finding #3: The calculation methodology applied results in a slight understatement of Program performance. Invoices for the 11,555 acre feet of purchased water totaled \$5,275,353. However, to calculate the result, staff used total Program expenditures for

SCVWD water of \$5,294,816, which included staff salary costs and gas and electricity costs. It is not accurate to use this number because it does not relate to the contract price. If staff had used the total of \$5,275,353, they would have calculated a result of 99.2% instead of 99.6%.

Recommendation #3: Staff should use expenditures for contract water, not the total expenditures for administering this portion of the Water Program when calculating annual savings on contract pricing.

Finding #4: Program staff indicated the presence of this measure encourages them to continually look at water rates and use non-contract water whenever available. However, the measure is only calculated at the end of the year and as such is not a tool for managing this resource.

Recommendation #4: Staff should structure the measure so that it measures their efforts throughout the year. For example, staff could combine quarterly results to arrive at an annual performance level.

Service Delivery Measure 31201-2:

Contracts for water supply meet projected commitments for three years into the future 100% of the time. Reported Result: 100%

The SOP states the purpose of this measure is to ensure the City never has a water supply shortage and is able to meet demand. Program staff stated meeting projected commitments is achieved 100% of the time because staff always contract for the amount of water they project is needed.

Finding #1: There is no element of performance in this measure as it does not insure contracts meet actual demand, only *projected* demand. The result is always 100%. Program staff agreed with audit staff that there is no real aspect of performance measurement in this measure and recommend it be eliminated.

Recommendation #1: This measure is being eliminated in the FY 2005/2006 budget restructure. Staff should work with auditors to develop a measure for the quality of the Program's water supply projections.

Service Delivery Measure 31201-3:

Water distribution system pressure is maintained between 40 – 105 psi 90% of the time. Reported Result: 97.8%

This measure tracks pressure in the water distribution system, which must be maintained within a certain range based on standards established by the American Water Works Association (AWWA). Staff did not have adequate means for tracking this measure in FY 2003/2004 so they used customer complaints as a proxy. Complaints were subtracted from the number of days in the year (365) and then this total was divided by 365 to arrive at a percentage.

Finding #1: The current wording of the measure does not accurately reflect what the Program has been measuring each year. Reported results are a reflection of customer complaints regarding water pressure, not the Program's monitoring of system pressures. The Program did not have the technological capability to track and report results for this measure, but will in FY 2005/2006 with the implementation of the new Supervisory Control and Data Acquisition (SCADA) system capable of continuously monitoring system pressure.

Recommendation #1: Program staff should consult with auditors on a calculation methodology for this measure when the SCADA system becomes operational (sometime in FY 2005/2006). The current calculation methodology does not sufficiently address how to calculate a result, specifically with regards to defining the unit of measurement.

Service Delivery Measure 31201-4:

85% of the annual identified recycled water users are connected to the recycled water system. Reported Result: 104.9%

This SDP measure is a duplicate of Program Measure 8. Auditors were not able to confirm the reported result. Comments and recommendations are the same as for Program Measure 8.

Service Delivery Measure 31201-5:

Average single family potable water usage is 5% below the 1987 baseline during periods of drought and no higher than baseline at all other times. Reported Result: 130.51%

This SDP measure stems from Program Measure 4, which reads, "Average total potable water usage is 5% below the 1987 baseline during periods of drought and no higher

than baseline at all other times.” Program staff reported the same result for this SDP Measure as they reported from Program Measure 4. Auditors were not able to confirm the reported result for either measure. Comments and recommendations are the same as for Program Measure 4.

Finding #1: Program staff stated after SDP Measures 31201-5 and 31201-6 were developed they realized the information they had from 1987, the baseline year, was not disaggregated by single and multi-family use. Therefore, they can only compare total usage between the current year and the baseline year.

Recommendation #1: None. This measure is being changed in the FY 2005/2006 budget restructure and will be a duplicate of Program Measure 4.

Service Delivery Measure 31202-1:

The number of hours customers are without water service is at the previous three year average. Reported Result:

Current Year – 6
Three Year Average – 23.67

This SDP measure is a duplicate of Program Measure 2. Auditors were not able to confirm the reported result. Comments and recommendations are the same as for Program Measure 2.

Service Delivery Measure 31202-2:

Water service is restored within 24 hours on emergency repairs 90% of the time and within 48 hours for all other repairs.

Reported Result:

Percent of Emergency Repairs – 100%
Percent of All Other Repairs – 100%

The intent of this measure is to ensure emergency and non-emergency repairs are addressed in a timely fashion. Staff stated that they only noted in the log when a repair took more than 24 hours. Staff believes no repairs took longer than 24 hours in FY 2003/2004, so they reported achievement of 100% for both categories of repair. Audit staff was not able to verify these results as Program staff did not log actual times water service was disrupted, only the date and location of emergency and non-emergency repairs.

Finding #1: Program staff did not actually track the time that water service was disrupted for emergency or non-emergency repairs.

Recommendation #1: None. The Program is now tracking the actual time the water is turned off. Auditors reviewed the new log being used to track this measure and found it sufficient.

Finding #2: This measure's results are not adequately described with a percentage. There are two problems with reporting results for this measure by means of a percentage. First, a percentage does not account for outliers in service provision. For example, 90% of all repairs may be completed in 24 hours, but the other 10% could take two weeks or more and this will not be seen in the results. Second, the measure does not provide the total number of repairs made, so there is no context for what 90% actually means. For example, did they make 5 repairs or 500?

Recommendation #2: Although this measure has been changed through the FY 2005/2006 budget restructure and the total number of repairs will be reported, auditors recommend that an additional line be added in the new structure to either report the average or median time it takes to restore water service. Adding an average or a median time to the reporting structure will give management a better indication of actual performance.

Service Delivery Measure 31202-3:

**Scheduled maintenance is conducted as planned 90% of the time.
Reported Result: 51.5%**

Program staff stated that in FY 2003/2004 they did not have enough staff to perform the scheduled maintenance and this is still a problem today. Staff indicated that the system is old and breaking down, which has increased the number of repairs they have to make to keep the system operating. Auditors were not able to confirm the reported result because the summary tables and data that program staff provided did not reconcile to reported result. However, staff pointed out and auditors confirmed that staff members were not instructed/required to keep logs per the SOP for this measure, only to track maintenance performed on timecards. While staff kept logs, they did not use these logs for reporting performance results.

Finding #1: The SOP does not reflect current practice with regards to the planning, tracking or measurement of maintenance. The SOP states that American Water Works Association (AWWA) standards are used to develop a plan for preventative maintenance work. Auditors found that while these standards are used to calculate the measure's result, they are not used for planning the work. For example, the AWWA standards require fire hydrants to be exercised once every year. The Program provided documentation stating that they are on a two-year schedule, exercising hydrants once every two years. Products budgeted for this sub-activity of preventative maintenance are based on this two-year schedule, not the AWWA standard. However, staff compared actual performance to the AWWA standard and not what they planned to achieve for the year.

The SOP also states that all preventative maintenance is included in this activity, but the reported result only reflects results for three of the fourteen sub-activities: fire hydrants, regular manual valves, and recycled water manual valves.

Recommendation #1: The Program needs to determine the appropriate level of maintenance to maintain and best preserve City assets and budget and plan to meet that service level. The measure wording needs to reflect what is actually being measured. The SOP needs to be revised to reflect actual practice with regards to planning, tracking and measuring results.

Finding #2: Staff could only produce maintenance logs for "Manual Valves," "Recycled Water (RW) Manual Valves," and "Blowoffs." However, staff used results for RW Manual Valves, Manual Valves, and Hydrants to calculate the outcome for the measure.

Recommendation #2: Staff should collect and use the results from all preventative maintenance activities in reporting results for this measure.

Service Delivery Measure 31202-4:

Backflow detector checks are conducted as planned 90% of the time.

Reported Result: 96%

This measure ensures backflow detector checks are annually tested and properly maintained. It is the responsibility of the property owner to check and maintain these devices. The Water Program uses a database set up by IT that indicates which backflow devices are due for their annual check. Staff then sends a letter to the property owner with a list of State approved companies that can perform the testing. Results of the test are sent directly to the Water Program by the tester. Water staff then updates the "date tested" field in the database by replacing the old date with the new date. Because dates are changed in the cells, the database structure cannot provide historical data beyond the current year. Documentation provided by the Program indicated that the system contained 2,818 backflow devices and 2,836 tests were performed. Staff stated they mistakenly calculated the result using hours instead of products and actual performance was 100.6%.

Finding #1: Documentation provided was not sufficient for auditors to confirm the number of tests completed. The Program provided a list of backflow device owners for six months, but this list did not indicate whether devices were tested or in compliance.

Recommendation #1: Staff needs to work with auditors in the implementation phase of the audit to develop a process for tracking and reporting results for this measure.

Finding #2: The SOP methodology for tracking and reporting results for this measure is not adequate. The SOP states "the primary data sources for this activity are the end of

fiscal year budget reports. Collection of this data is from employee timecards, which is then entered into the MBO monthly reports.”

Recommendation #2: See Recommendation #1. The Program will need to change the SOP to instruct staff in this new procedure.

Finding #3: Staff mistakenly used hours instead of products to calculate the reported result. Staff calculated a result of 96 percent; however the number of devices checked was 2,836 and the budgeted number of checks to be completed was 2,818. Staff stated that they had mistakenly used hours instead of products and that is how they arrived at a result of 96%. Actual performance was 100.6%

Recommendation #3: Management should check staff calculations for Progress Reports or have another staff member check these calculations prior to submitting results.

Finding #4: There is a discrepancy between the calculation sheet the Program provided to auditors and the result reported in the MBO. Staff provided a calculation sheet reporting a result 100.6%, but the MBO had a reported result of 96%.

Recommendation #4: Staff needs to create calculation sheets when results are submitted in the annual performance report. Staff should reconcile calculations with the reported results in the MBO and correct any misreporting.

Service Delivery Measure 31202-5:

The Water Program is in compliance with all health and water quality regulatory agencies 100% of the time. Reported Result: 100%

This SDP measure is a duplicate of Program Measure 3. Auditors were not able to confirm the reported result. Comments and recommendations are the same as for Program Measure 3.

Service Delivery Measure 31202-6:

Water system infrastructure projects are completed as planned 80% of the time. Reported Result: 100%

The intent of this measure is to ensure that Water system infrastructure projects are completed on timely schedule. However, this measure does not effectively measure this. It appears that any delays to projects are interpreted by this measure as being “planned” and therefore all projects are completed as planned. Based on information provided by Program staff, the two projects completed in FY 2003/2004 were delayed in

terms of their start and completion dates, but this is not necessarily the responsibility of staff. Staff reported a result of 100% of projects completed as planned even though both projects were delayed.

Finding #1: The measure wording is too vague and does not provide useful information to Program staff. There are several problems with this measure and its definition. First, it is not clear what constitutes a project "completed as planned." The measure wording is ambiguous in determining if this means the originally scheduled project completion date or revised project completion date. Second, project deadlines frequently change and are often beyond the control of Program staff. Changes in completion dates do not necessarily constitute error on the part of the City or its project staff and this measure may unduly penalize staff. However, the timely completion of projects remains an important goal.

Recommendation #1: The Program needs to determine what they are trying to measure – how often/much projects are delayed or how long projects take to complete. For example, the Program could report on the average time projects are delayed before being started. Or, the Program could report on the actual time it took to complete a project versus the budgeted time to complete the project. Management needs to evaluate what information is needed and consult with auditors to develop a new measure.

Finding #2: Using a percentage to report the measure results is not appropriate given the relatively few numbers of CIP projects. CIP projects are large undertakings and often span more than one year. Such projects are limited in frequency and reporting completion using a percentage is not appropriate. For example, in FY 2003/2004 there were only two CIP projects completed. If one of these projects had not been completed on time, even by one month, then the result would have been 50% for this measure. In addition, a percentage does not give you any sense of the number of projects completed.

Recommendation #2: See Recommendation #1. Staff should consider this finding in developing the new measure.

Finding #3: The SOP does not sufficiently define terms within the measure and does not provide clear direction on how to calculate the measure results. As stated in the above section, it is unclear what constitutes a completed project from the SOP description and how Program staff should evaluate the revision of completion dates. For example, the two projects that were started and completed in FY 2003/2004 both have revised "start" and "end" dates. However, Program staff reported achieving a 100 percent on this measure, so it appears that even with these revisions, staff considered the projects "completed as planned."

Recommendation #3: Staff needs to develop an SOP that clearly defines the terms in the measure and provides detailed instruction on how to calculate the reported result. This will be dependent on what measure is developed.

Service Delivery Measure 31203-1:

**A customer satisfaction rating of 80% for Water Supply and Distribution is achieved.
Reported Result: 85%**

This SDP measure is a duplicate of Program Measure 5. Auditors were able to confirm the reported result. Comments and recommendations are the same as for Program Measure 5.

Service Delivery Measure 31203-2:

The number of water supply and distribution complaints per 1,000 services is at the previous three year average. Reported Result: 9.09

This measure provides information on the number of complaints made regarding water supply and distribution services provided to citizens. There was a slight discrepancy between the actual result and what was reported in the MBO. Staff provided a calculation sheet that showed the reported result should have been 8.76 complaints per 1,000 services for FY 2003/2004.

Finding #1: This measure has no stable service level goal and the three-year average is not reported so there is no basis for comparison. Stating the measure this way assumes the previous years' results were at an acceptable level. The three-year average only tells you what the current service level is and not where it should be according to policy and industry standards.

Recommendation #1: Program staff should set the measure's performance goal using actual policy and/or industry standard service levels. This will eliminate the need for a three year average.

Finding #2: The SOP does not provide clear instructions on how to calculate the result. The SOP does not inform staff of how to derive a total number of services provided by the City. As a result, staff used two different numbers, one based on the calendar year and the other based on the fiscal year. The second calculation, based on the fiscal year did not make it into the financial reports.

Recommendation #2: Audit staff recommends the Program use fiscal year data produced by the City's Utility Billing, Collection, and Revenue Program for calculating this measure. The SOP should be revised to specify this information.

Finding #3: The result from the calculation sheet provided by the Program does not match the reported result in the MBO. Based on the calculation sheet and the auditor's calculation, the reported result for this measure should have been 8.76 complaints per 1,000 services, not 9.09 as reported in the MBO.

Recommendation #3: *Staff should create calculation sheets at the time they report results in the MBO. These sheets should be filed with source documents. Staff should reconcile calculated results with the MBO and resolve any discrepancies when they are discovered.*

Service Delivery Measure 31203-3:

City water rates, weighted by user category, are five percent less than the Bay Area average as determined by Bay Area Water Users Association surveys. Reported Result: 32.4%

This SDP measure is a duplicate of Program Measure 1. Auditors were able to confirm the reported result. Comments and recommendations are the same as for Program Measure 1.

Section 3: Activity Details

Activity 312100:

San Francisco Water Department (Hetch-Hetchy). Product: An Acre Foot of Water. Reported Result: 10,734 Acre Feet of Water.

Auditors reviewed invoices for water from SFWD for FY 2003/2004 and confirmed the purchase of 10,734 Acre Feet. The MBO reported a total of \$5,743,702 spent for water from SFWD. The invoices for this water totaled \$5,419,358, a difference of \$324,344. The additional expenditures are attributed primarily to utilities (gas and electric), \$230,690, and taxes and licenses, \$93,050. The SOP includes these costs in its description for this Activity. Auditors did not reconcile expenditures beyond looking at Level 3 Budget Reports.

No findings to note.

Activity 312110:

Santa Clara Valley Water District (SCVWD). Product: An Acre Foot of Water. Reported Result: 11,555 Acre Feet of Water.

Auditors reviewed invoices for water from SCVWD for FY 2003/2004 and confirmed the purchase of 11,555 Acre Feet. for a total of \$5,275,353. The MBO reported a total of \$5,294,806 spent for water from SCVWD. The invoices for this water totaled

\$5,275,353, a difference of \$19,453. The additional expenditures were attributed to utilities (gas and electric). The SOP includes these costs in its description of this Activity. Auditors did not reconcile expenditures beyond looking at Level 3 Budget Reports.

No findings to note.

Activity 312120:

City Wells. Product: An Acre Foot of Water. Reported Result: 1,425 Acre Feet of Water.

Auditors reviewed invoices for water from SCVWD, who provides access to the water in City wells, for FY 2003/2004 and confirmed the purchase of 1,425 Acre Feet. The MBO reported a total of \$667,190 spent for water from SCVWD. The invoices for this water totaled \$533,737, a difference of \$133,543. The additional expenditures were attributed to utilities (electric and gas). The SOP includes these costs in its description of this Activity. Auditors did not reconcile expenditures beyond looking at Level 3 Budget Reports.

No findings to note.

Activity 312130:

Recycled Water Distribution. Product: An Acre Foot of Water. Reported Result: 1,611 Acre Feet of Water.

Auditors were not able to confirm the amount of Recycled Water distributed as reported for this Activity. Based on documentation provided for Program Measure 8, the Program distributed 1,905.79 Acre Feet of Recycled Water in FY 2003/2004.

Finding #1: There is a discrepancy between the source documents provided to summarize water consumption/distribution and products reported in the MBO. The source documents for water consumption yielded a total of 1,905.79 acre feet, not the 1,611 reported by the Program. This is a percentage difference of 18.3.

Recommendation #1: Staff needs to reconcile source documents with calculation sheets.

Activity 312140:**SCADA System Operation. Product: Work Hours. Reported Result: 5,080.40 Hours.**

The product for this Activity is a work hour. Auditors do not reconcile activities for which the product is a work hour because there is no practical method by which to verify that the hours were worked.

Activity 312150:**Demand Management. Product: Work Hours. Reported Result: 1,075 Hours.**

The product for this Activity is a work hour. Auditors do not reconcile activities for which the product is a work hour because there is no practical method by which to verify that the hours were worked.

Activity 312160:**Administration – Managing Water Resources. Product: Work Hour. Reported Result: 1,701.25 Hours.**

The product for this Activity is a work hour. Auditors do not reconcile activities for which the product is a work hour because there is no practical method by which to verify that the hours were worked.

Activity 312200:**Preventative Maintenance. Product: A Preventative Maintenance Activity Completed. Reported Result: 7,990.**

Auditors were not able to confirm the products for this activity. Auditors noted that the SOP for this activity states products are tracked on timecards and does not instruct staff to use a log. This activity includes several sub-activities that are all tracked using separate logs. Staff provided logs for Recycled Water (RW) Manual Valves, Manual Valves and Blowoffs, but not for the remaining sub-activities included in preventative maintenance: RW Cathodic Protection, RW Annual Site Inspection, RW Inspect Pump Stations, RW Blowoffs, RW Hydrants, Hydrants, Auto Valves, and Inspect Pump Stations, Tanks, Wells.

Exhibit 3 – FY 2003/2004 Sub-Activity Reconciliation:

Sub-Activity	Products Reported in MBO	Products from Logs (Totalled by Auditor)
Blowoffs	283	282
RW Valves - Manual	214	166
Valves - Manual	2587	Between 1240 and 2153*
*913 entries had no date and auditor is unable to determine if they fall in FY 2003/2004		

Finding #1: The product counts from logs provided for activities do not reconcile with MBO reported products. Staff provided source logs for three sub-activities: "Blowoffs," "RW Manual Valves," and "Manual Valves". Staff also provided summary tables of the products for all sub-activities based on the MBO report. Exhibit 3 illustrates the totals in the MBO report versus auditor calculated totals for these activities. For "Manual Valves" the auditors found a total of 2,600 entries in the log, but dates for 447 entries placed them outside of FY 2003/2004. Of the remaining 2,153 entries, 913 did not have dates so auditors were unable to determine if the products from these entries should be included in FY 2003/2004 totals.

Recommendation #1: *Staff should keep chronological logs so that dates from different fiscal years do not appear in the same section and are not interspersed with one another. Product totals from logs should be reconciled on a regular basis with MBO reports and any discrepancies resolved promptly.*

Finding #2: For some sub-activities there are missing or non-existent logs. Staff cannot rely on timecards only to report products, especially with regards to maintenance activities. It is important that such activities be logged so staff can tell how often a piece of equipment or infrastructure has been looked at and serviced. Such logs should be kept on all maintenance activities.

Recommendation #2: *Staff should maintain logs for maintenance activities on a daily basis and use these logs to track and report products for these activities. At a minimum, logs should include columns for the date, the initials of staff performing maintenance, a brief description of what was done, an I.D. number or other designation for the part or item serviced, and a comments field for any follow-up.*

Activity 312210:

Corrective Repairs. Product: A Corrective Repair Completed. Reported Result: 4,912.

Auditors were not able to verify the products for this activity. Staff reported this activity was only documented and tracked on timecards. There is no practical method by which

auditors can verify products only documented with timecards. Staff stated only "main breaks" are logged. There are work orders for some of the smaller corrective maintenance activities, but there is no feasible way to separate these work orders out from the other work orders kept by the Program.

Finding #1: Only timecards are used to document this activity. Timecards are not an adequate means for documenting activities. It is important for the Program to have, at minimum, a repair log for referral which can help them document and track repairs and monitor/manage the system.

Recommendation #1: *As suggested in the Summary of Findings, the Program needs to procure and install a work order monitoring system. In the interim, the Program needs to develop a log for this activity. The log should include columns for the date, the initials of staff performing maintenance, a brief description of what was done, an I.D. number or other designation for the part or item serviced, and a comments field for any follow-up.*

Activity 312220:

New Service. Product: A New Service Installed. Reported Result: 480.

Auditors were not able to confirm the products for this activity. The report generated by Utility Billing, Collection, and Revenue Management for new services installed shows a total of 88 products for FY 2003/2004 versus the 480 products reported in the MBO.

A product for an activity may have many components to it, but only the end result should be counted. While sub-activities are necessary for achieving the product, they should not be counted in and of themselves for purposes of reporting (though the program may need to track them for management purposes) because this will inflate results. It appears that staff were counting more than new services installed as products. For example, when staff performed "utility locates" they would have put this on their timecard as a product for this activity. This would account for why the total products in the New Service Installation Report are so much less than the products reported in the MBO.

Finding #1: It appears disparate products are being combined to generate the reported result. The SOP definition states work performed under the Activity includes tapping water mains, setting new meters, providing tapes, lines and meter sets for all reclaimed water and providing "utility locates" for the Underground Service Alert (USA) Program. However, the product definition is a new service installed.

Recommendation #1: *Management needs to change the procedure for tracking this activity and separate out the sub-activities with disparate products into separate activities. Staff will need to be trained on how to appropriately account for these activities. The SOP should be revised to reflect these changes.*

Finding #2: Timecards were used to track products for this activity rather than the actual log for New Services Installed. Timecards are not an adequate means for tracking and reporting data as they do not provide enough background information to reconcile products to efforts. All products for an activity must be generated from a work order system or entered into a log that is separate from the employee's timecard.

Recommendation #2: *Staff needs to create a comprehensive database or log that documents and tracks all products for this activity. This log should be used for monthly progress reporting.*

Activity 312230:

Backflow Program. Product: A Backflow Device in Compliance. Reported Result: 3,063.

Auditors were not able to confirm the reported number of backflow devices in compliance for this activity. It is the responsibility of the property owner to check and maintain these devices. The Water Program uses a database set up by IT that indicates which backflow devices are due for their annual check. Staff then sends a letter to the property owner with a list of State approved companies that can perform the testing. Results of the test are sent directly to the Water Program by the tester. Water staff then updates the "date checked" field in the database by replacing the old date with the new date. Because dates are changed in the cells, the database structure cannot provide historical data beyond the current year.

Finding #1: Documentation provided was not sufficient for auditors to confirm the number of tests completed. The Program provided a list of backflow device owners for six months, but this list did not indicate whether devices were tested or in compliance.

Recommendation #1: *Staff needs to work with auditors in the implementation phase of the audit to develop a process for tracking and reporting products for this measure.*

Finding #2: It appears disparate products are being combined to generate results for this activity. Staff stated there were a total of 2,818 devices in FY 2003/2004, but the reported result was 3,063. Auditors found the sending of notices to device owners, making repairs, and performing installations were also being included in the reported number.

A product for an activity may have many components to it, but only the end result should be counted. While sub-activities are necessary for achieving the product, they should not be counted in and of themselves for purposes of reporting (though the program may need to track them for management purposes) because this will inflate results. For example, to ensure a backflow device is in compliance, the Program may send a notice to the owner and may also make a repair on that device. However, only

one device is in compliance. By counting the notice, the repair and the device in compliance, the program may have a count of three products when only one device is compliant. It appears that this has happened with this activity. There are only 2,818 devices in the City and therefore there should be a maximum of 2,818 devices in compliance, not the 3,063 reported.

Recommendation #2: Management needs to change the procedure for documenting this activity and separate out the sub-activities with disparate products into separate activities. Staff will need to be trained on how to appropriately account for these activities. The SOP should be revised to reflect these changes.

Activity 312240:

Water Quality Monitoring. Product: A Test Completed. Reported Result: 23,091.

Auditors could not confirm the reported number of products for this activity. There was a miscommunication between Program and Audit staff. Program staff thought the products for this activity came from Monthly Water Quality reports that are sent to the Department of Health Services (DHS). However, auditors found these reports document only a fraction of the total samples taken for monitoring water quality. It was not until the final stages of this report that auditors and Program staff realized that additional products for this activity are being recorded directly by Water Pollution Control Plant Lab staff.

Finding #1a: Program staff gave auditors DHS Monthly Water Quality reports as support documentation for this Activity. The source documentation provided for the Monthly Water Quality Report for June 2004 indicated a total of 834 samples were collected. When this number is multiplied to derive an annual total, it is less one half of the reported products for this Activity.

Finding #1b: The auditor could not find source documentation for four of the pages in the Monthly Water Quality Report that was sent to DHS for June. Staff provided auditors with both the report sent to DHS and the supporting documentation for June 2004. Source pages directly correspond to pages in the report. Auditors could not find source pages for 4 of the 24 report pages.

Recommendation #1: Program staff needs to work with auditors during the implementation phase of the audit to develop a system to track and reconcile source documents to reported results.

Activity 312260:

Administration – Water Distribution System. Product: Work Hour. Reported Result: 1,564.75 Hours.

The product for this Activity is a work hour. Auditors do not reconcile activities for which the product is a work hour because there is no practical method by which to verify that the hours were worked.

Activity 312300:

Customer Services. Product: A Customer Request Completed. Reported Result: 2,480.

Finding #1: The products for this Activity were recorded on timecards and then supporting documents were filed by street name. There is no practical method by which auditors can reconcile what was reported on the timecards to supporting documentation.

Recommendation #1: Program management needs to work with audit staff to create a log or database system to reconcile reported results to supporting documentation.

Activity 312310:

Water Usage Measurement. Product: A Meter Serviced or Installed. Reported Result: 2,035.

Based on documents provided by the Program, auditors totaled only 1,595 products for this activity, not the 2,035 reported. This is a difference of 21.6 percent.

Finding #1: The product as it appears in the MBO, “a meter serviced or installed,” is different from that specified in the Activity’s SOP, “a water meter serviced.” In addition, it is confusing to use the terminology “installed” as it appears to be the same as that in Activity 312220, “A New Service Installed.” Documentation for this activity shows the products are a meter serviced or replaced. New meter installations are only tracked in 312220.

Recommendation #1: Staff should change the Activity wording to match what is stated in the SOP.

Finding #2: Products totaled by auditors from logs provided for this Activity totaled 1,595, not the 2,035 reported. It is not clear to auditors what caused this discrepancy.

Recommendation #2: Staff needs to reconcile source documents to reported products in the MBO and correct and discrepancies.

Activity 312340:

Administration. Product: Work Hour. Reported Result: 14,493.10 Hours.

The product for this Activity is a work hour. Auditors do not reconcile activities for which the product is a work hour because there is no practical method by which to verify that the hours were worked.

Activity 312320:

Training. Product: Work Hour. Reported Result: 0.00 Hours.

There were no products for this Activity in FY 2003/2004.

Attachment 1: Measure Statistics

					General Measure/Activity Issue Areas				
	Measure/Activity	Accurate	Not Accurate	Not Able To Verify As Accurate or Not Accurate	Measure Text or Structure	SOP Documentation or Instruction	Data Integrity	Reporting Integrity	Calculation
1)	Outcome 1	1			1	1			
2)	Outcome 2			1	1	1	1		
3)	Outcome 3	1			1	1			
4)	Outcome 4		1		1			1	1
5)	Outcome 5	1							
6)	Outcome 7 (budget ratio)	1				1			
7)	Outcome 8		1		1		1	1	
8)	SPD 31201-1	1			1	1			
9)	SPD 31201-2	1			1				
10)	SPD 31201-3			1	1		1		
11)	SPD 31201-5 (stems PM 4)		1		1				1
12)	SPD 31202-2			1	1		1		
13)	SPD 31202-3			1		1	1		
14)	SPD 31202-4		1			1	1	1	1
15)	SPD 31202-6			1	1	1			
16)	SPD 31203-2		1		1	1		1	
17)	Activity 312100	1							
18)	Activity 312110	1							
19)	Activity 312120	1							
20)	Activity 312130		1				1		
21)	Activity 312200			1			1	1	
22)	Activity 312210			1			1		
23)	Activity 312220			1	1		1		
24)	Activity 312230			1	1		1		
25)	Activity 312240			1			1	1	
26)	Activity 321300			1			1		
27)	Activity 312310		1		1		1	1	
Total		9	7	11	15	9	14	7	3
Percent of 27 Measures		33.3%	25.9%	40.7%	55.6%	33.3%	51.9%	25.9%	11.1%

Duplicate Measures

	Measure/Activity
1)	SDP 31201-4
2)	SDP 31202-1
3)	SDP 31202-5
4)	SDP 31203-1
5)	SDP 31203-3

Activities Not Audited

(Due to Products = Work Hours)

	Measure/Activity
1)	Activity 312140
2)	Activity 312150
3)	Activity 312160
4)	Activity 312260
5)	Activity 312320
6)	Activity 312340

Inactive Measures

	Measure/Activity
1)	Outcome 6